CLAIMS

1. A method of selecting an access network from among one or more access networks capable of providing service to a mobile communication station, **characterized by:**

determining (S1) a radio quality from the terminal to each access network,

determining (S2), for each access network, a utilization factor for at least one node,

determining (S3), for each access network, a user perceived data quality, based on said determined utilization factor and said determined radio quality for the access network, and

selecting (S4) at least one of said access networks, based on the determined user perceived quality.

2. The method according to claim 1, **characterized by** the further steps of estimating a radio link bitrate μ for each access, based on the determined radio quality q, and

determining the user perceived data quality , based on the determined utilization factor and the estimated radio link bitrate.

3. The method according to claim 2, **characterized by** estimating the radio link bitrate according to:

$$\mu=g(q)$$

where g is an access specific function.

4. The method according to claim 3, **characterized in that** the radio link quality q is represented by at least any one of pilot signal strength, beacon signal strength, Ec/N0, SIR, C/I, bit error rate, block error rate, and packet error rate..

5. The method according to claim 2 or 3, **characterized by** determining (S3) the user perceived quality Q_u according to:

$$Q_u = \mu * f(p)$$

where μ represents the radio link bitrate, and ρ represents the utilization factor for the access.

6. The method according to claim 2 or 3, **characterized by** determining (S3) the user perceived quality according to:

$$Q_u = \mu^*(1-\rho)$$

where μ represents the radio link bitrate, and ρ represents the utilization factor for the access.

7. The method according to any of claims 2-6, **wherein** μ is constant.

8. The method according to any of claims 5-7, **wherein** ρ is constant.

9. The method according to claim 5, **wherein** the function $f(\rho)$ is specific for each type of access network.

10. The method according to any of the above claims, **characterized by** representing said user perceived quality with a data bit rate for the access network.

11. The method according to any of claims 1 to 9, **characterized by** representing said user perceived quality with an active session data throughput for the access network.

12. The method according to claim 10, **wherein** said data bitrate comprises an estimated *Session Circuit Switched Equivalent* (CSE) bitrate.

13. The method according to claim 5 or 6, **wherein** ρ is estimated by the expression:

$$\rho = 1 - \frac{P_{CCH}}{P_{TOT}},$$

where P_{CHH} is the common power, and P_{TOT} is the total power.

14. The method according to claim 13, **wherein** P_{CPICH} is estimated from the received pilot power and a factor F_{CCH} that compensates for the other common channels, and P_{TOT} is estimated from the received wideband signal strength.

15. The method according to claim 14, **characterized by** determining (S2) the utilization by measuring at least a received pilot power SS_{pilot} and a total power SS_{out} from a received wideband signal strength, whereby the utilization as represented by ρ is estimated.

16. The method according to claim 1, **characterized by** selecting (S4) the at least one access before the terminal is connected to an access.

17. The method according to claim 1, **wherein** said accesses utilize the same type of radio access technology.

18. The method according to claim 1, **wherein** said accesses utilize different types of radio access technologies.

19. The method according to claim 1, **wherein** said accesses belong to the same network.

20. The method according to claim 1, wherein said accesses belong to different networks.

21. The method according to claim 1, **wherein** said accesses belong to the same operator.

22. The method according to claim 1, **wherein** said accesses belong to different operators.

23. The method according to any of the above claims, **wherein** the one or more accesses include at least one of WCDMA, CDMA2000, GSM, WLAN or GPRS.

24. The method according to any of the previous claims, **wherein** said node comprises at least one of an access point, and base station.

25. A system enabling selection of an access network from among one or more access networks capable of providing service to a mobile communication station, **characterized by:**

means (12) for determining a radio quality from the terminal (10) to each access network (20),

means (13) for determining, for each access network (20), a utilization factor for at least one access point,

means (14) for determining, for each access network (20), a user perceived data quality, based on said determined utilization factor and said determined radio quality for the access network, and

means (15) for selecting at least one of said access networks, based on the determined user perceived quality.

26. The system according to claim 25, **characterized in that** said determining means (12) further comprise means (12') configured to estimate a radio link bitrate μ for each access, based on the determined radio quality q, and

said determining means (14) are further configured to determine the user perceived data quality , based on the determined utilization factor and the estimated radio link bitrate.

27. The system according to claim 26, **characterized in that** said estimating means (12') are configured to estimate the radio link bitrate according to:

$$\mu=g(q)$$

where g is an access specific function.

28. The system according to claim 25, **characterized in that** said user perceived data quality determining means (14) are configured to determine the user perceived quality according to:

$$\mu * f(\rho)$$

29. The system according to claim 25, **characterized in that** said user perceived data quality determining means (14) are configured to determine the user perceived quality according to:

$$\mu * (1-\rho)$$

30. The system according to claim 28 or 29, **characterized in that** said utilization determining means (13) are configured to estimate ρ according to:

$$\rho = 1 - \frac{P_{CCH}}{P_{TOT}},$$

where P_{CHH} is the common power, and P_{TOT} is the total power.

31. The system according to claim 30, **characterized in that** P_{CHH} is estimated from the received pilot power and a factor F_{CCH} that compensates for the other common channels, and P_{TOT} is estimated from the received wideband signal strength.

32. The system according to claim 31, **characterized in that** the utilization is determined by measuring at least a received pilot power SS_{pilot} and a total power SS_{out} from a received wideband signal strength, whereby the utilization as represented by ρ is estimated.

33. The system according to any of claims 26-29, **characterized in that** said radio quality determining means (12) are further configured to estimate μ based on at least one of pilot signal strength, beacon signal strength, Eb/N0, SIR, and C/I.

34. The system according to any of claims 25-33, **characterized in that** said node comprises at least one of an access point, and base station.

35. A mobile communication station (10) capable of receiving service from one or more access networks (20), **characterized by**:

means (12) for determining a radio quality from the terminal (10) to each access network (20),

means (13) for determining, for each access network (20), a utilization factor for at least one node,

means (14) for determining for each access network (20), a user perceived data quality, based on a utilization factor for the access network (20), and

means (15) for selecting at least one of said access networks, based on the determined user perceived quality and the radio quality.
